# Greenridge Utilities, Inc. System I.D. 0120011 2008 Water Quality Report

We are pleased to provide you with the 2008 Water Quality Report. This report is designed to inform you of the quality of water we delivered to you over the past year. Our goal is to provide you a safe and dependable supply of drinking water. Our wells draw from the Port Deposit Gneiss aquifer in Harford County. An aquifer is a geological formation that contains water. We also purchase water from the Harford County Water System. Harford County draws water from several sources. The Perryman Water Plant draws water from the Potomac group aquifer. The Abingdon Water Plant draws surface water from the Susquehanna River or the Loch Raven Reservoir and the County's Havre de Grace Water Plant draws water from the Susquehanna River.

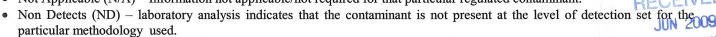
If you have any questions about this report or your water utility, please contact customer service at (800) 860-4512. We want our customers to be informed about their water utility. We have no regularly scheduled meeting.

Source Water Assessment (SWA), The Maryland Department of the Environment has completed a SWA for the water system. The source for Greenridge Utilities water supply is an unconfined, Piedmont aquifer known as the Port Deposit Gneiss. The SWA area for the Greenridge Utilities wells were delineated using U.S. EPA approved methods specifically designed for each source. Potential sources of contamination within the assessment area were identified based on site visits, database reviews, and land use maps. Well information and water quality data were also reviewed. Figures showing land use and potential contaminant sources within the SWA area and an aerial photograph of the well locations are enclosed in the full (SWA) report. The susceptibility analysis of the Greenridge Utilities water supply was based on the review of the water quality data, potential sources of contamination, aquifer characteristics, and well integrity. It was determined that the Greenridge Utilities water supply is susceptible to contamination by nitrates, and radionuclides, but is not susceptible to volatile organic compounds (VOC's), synthetic organic compounds (SOC's), microbiological contaminants, and other regulated inorganic compounds (IOC's). If you would like to review the report or have any other questions or concerns regarding it please call our office at (800) 860–4512.

Greenridge Utilities, Inc. routinely monitors for components in your drinking water according to Federal and State laws. This report covers the period of January 1 to December 31, 2008. We are pleased to report that our drinking water meets all federal and state requirements.

#### Definitions:

• Not Applicable (N/A) – Information not applicable/not required for that particular regulated contaminant.



• Standard units (S.U.) – standard units is a measurement of that particular regulated contaminant.

- Compliance Level (CL) Is the value used to determine compliance with MCL or TT. The CL for contaminants can be a maximum test value, an average, or meeting a condition for a certain percentage of the time.
- Treatment Technique (TT) a required process intended to reduce the level of a contaminant in drinking water.
- Intestinal Parasites Microorganisms like Cryptosporidium and Giardia lamblia can cause gastrointestinal illness (e.g., diarrhea, vomiting, cramps). In 2004, two samples of untreated river water showed the presence of Giardia lamblia and Cryptosporidium. None were found in the treated drinking water.
- Parts per million (ppm) or milligrams per liter (mg/l) one part per million corresponds to one minute in two years or a single penny in \$10,000.
- Parts per billion (ppb) or micrograms per liter (ug/l) one part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.
- Picocuries per liter (pCi/L) picocuries per liter is a measure of the radioactivity in water.
- Action level (AL) action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Maximum contaminant level (MCL) The maximum contaminant level is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
- Maximum contaminant level goal (MCLG) The "goal" is the level of a contaminant in drinking water below which there is no known or expected health risk. MCLG's allow for a margin of safety.
- Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- Maximum Residual Disinfectant Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

• Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Based on certain criteria, some systems may be allowed to monitor for regulated contaminants less often than once a year. In this case, the table will include the date and results of the most recent sampling. Our system received monitoring waivers for: cyanide, nitrite, asbestos, combined uranium and radium-226.

## **Green Ridge Utilities results**

**Copper Contaminants** 

Contaminant (units)	Sample Date	Your Water	# of sites found above the AL	MCLG	MCL	Likely Source of Contamination
Copper (ppm) (90 <sup>th</sup> percentile)	2008	0.72	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Disinfectants & Disinfection By-Product Contaminants

Contonius et (conits)	MCL/MRDL	Your	Range			
Contaminant (units)	Violation	Water	Low High	MCLG	MCL	Likely Source of Contamination
	Y/N	average				
HAA5 (ppb) [Total Haloacetic Acids]	No	49.4	17.6 / **62.1	N/A	60	By-product of drinking water chlorination.  **Compliance is determined by the annual running average. Average = rolling yearly average by quarter
TTHM (ppb) [Total Trihalomethanes]	No	43.2	16.4 / 62.4	N/A	80	By-product of drinking water chlorination
Chlorine (ppm) Tested Daily	No	1.1	0.8 - 1.4	MRDLG = 4	MRDL = 4	Water additive used to control microbes

Synthetic Organic Chemical Contaminants including pesticides and herbicides

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
2, 4, 5-TP (Silvex)(ppb)	Sept 18	No	0.84	N/A	50	50	Herbicide
Pentachlorophenol (ppb) Well #1	Sept 18	No	0.02	N/A	0	1	Herbicide and wood preservative
Di(2-ethylhexyl) phthalate (ppb)	Sept 18	No	0.5	N/A	0	6	Discharge from rubber and chemical factories

**Secondary and Unregulated Contaminants** 

Contaminant (units)	MCL/MRDL Violation Y/N	Your Water average	Range Low High	MCLG	MCL	Likely Source of Contamination
Iron (ppm) Tested Daily	No	0.04	0.03 - 0.04	N/A	0.3	Naturally occurring
pH (s.u.) Tested Daily combined station results	No	7.0	6.8 - 7.3	N/A	Outside of Range (6.5 –8.5)	Naturally occurring
Phosphate High (ppm)	No	0.4	0.3 - 0.6	N/A	N/A	By-product of water treatment process.
Sodium (ppm) (2007) Station #1/#2/#3	No	67/60/76	N/A	N/A	N/A	Erosion of natural deposits, leaching: water treatment chemicals

**Nitrate Contaminants** 

Contaminant (units)	MCL Violation Y/N	Your Water	Range Low High	MCL G	MCL	Likely Source of Contamination
Nitrate (as Nitrogen) (ppm) Station # 1 / #2 / #3	No/No/No	5/3/5.3	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Radiological Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Alpha emitters	Mar 07,	4			1 11 ca v	
(pCi/L)	Mar 07,	No	2/3/4	0	15	Erosion of natural deposits
by Station #1,2,3	Sept 08		= =			
Beta/photon emitters	Mar 07,					
(pCi/L)	Mar 07,	No	4/5/3	0	50	Decay of natural and man-made deposits
by station #1,2, 3	Sept 08					
Combined Radium			10 × 11 × 11 × 11 × 11 × 11 × 11 × 11 ×			
(pCi/L) by Station	Mar 07	No	0.1/0.2/0.4	0	5	Erosion of natural deposits
#1,2,3						

**Inorganic Contaminants** 

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
Barium (ppm)	2007	No	0.125	0.12 - 0.13	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits

**Volatile Organic Chemical Contaminants Regulated and Unregulated** 

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
1,2,4 – Trichlorobenzene (ppb)	2007	No	0.8	N/A	70	70	Discharge from textile-finishing factories
1,3,5 – Trimethylbenzene (ppb)	2007	N/A	1.2	N/A	N/A	N/A	Discharge from textile-finishing factories
Xylenes (Total) (ppm)	2007	No	0.0048	N/A	10	10	Discharge from petroleum factories; Discharge from chemical factories.
Toluene (ppm)	2007	No	0.0022	N/A	1	1	Discharge from petroleum factories
Ethylbenzene (ppb)	2007	No	1.2	N/A	700	700	Discharge from petroleum refineries



#### HARFORD COUNTY GOVERNMENT WATER DATA 2008 (CCR)

Data from testing by Operations, Commercial Labs, MDE and City of Havre de Grace

**Inorganic Contaminants** 

Liidi gaine Containi	i de i i e e					
Contaminant (units)	MCL Violation Y/N	Your Water Center line	Range Low High	MCLG	MCL	Likely Source of Contamination
Arsenic (ppb)	No	.06	ND / 5	0	10	Erosion of natural deposits; Runoff from orchards; glass and electronics production wastes
Barium (ppm)	No	0.06	.03 / .14	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	No	0.9	0.8 / 1.1	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Chromium (ppb)	No	0.5	2 / 2	100	100	Discharge from steel mills, pulp mills, erosion of natural deposits.

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

**Microbiological Contaminants** 

Tierobiological Containmants			_			
Contaminant (units)	MCL		Range		# 12 12 12 12 12 12 12 12 12 12 12 12 12	
Contaminant (units)	Violation	CL		MCLG	MCL	Likely Source of Contamination
	Y/N		Low High			
Turbidity (NTU) $TT \leq 0.3$						
in 95% of samples in a	No	100%	0.02 - 0.29	N/A	TT	Soil runoff. Average 0.051
month.						
						Naturally present in the
T-4-1 G-1:f (0/ -f						environment. In 2008, 1219
Total Coliform (% of	No	1.0%	ND - N/A	0	<5%	samples were tested with only 1
positive tests)						positive result – follow up
						samples were negative.

**Radiological Contaminants** 

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Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water Low/CL/High	MCLG	MCL	Likely Source of Contamination
Gross Alpha emitters (pCi/L)	2007	No	2/2/2	0	15	Erosion of natural deposits
Gross Beta/photon emitters (pCi/L)	2007	No	5/5/5	0	50 ***	Decay of natural and man-made deposits
Radium-228 (pCi/L)	2007	No	1 /1 /1	0	5	Erosion of natural deposits
Radium-226(pCi/L)	2007	No	0.3 / 0.3 / 0.3	0	5	Erosion of natural deposits

<sup>\*\*\*</sup> EPA considers 50 pCi/L to be the level of concern for beta particles

**Disinfectants & Disinfection By-Product Contaminants** 

Contaminant (units)	MCL/MR DL Violation Y/N	CL	Range Low High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb) for 2007/08 [Total Trihalomethanes]	No	31	29 / 31	N/A	80	By-product of drinking water chlorination. CL = rolling yearly average by quarter.
HAA5 (ppb) for 2007/08	No	43	39 / 43	N/A	60	By-product of drinking water chlorination. CL = rolling yearly average by quarter

[Total Haloacetic Acids]						
Chlorine (ppm)	No	2.9	0.4 / 2.9	MRDLG = 4	MRDL = 4	Water additive used to control microbes (Avg. 1.4)

Nitrate/Nitrite Contaminants

Contaminant (units)	MCL		Range				
Contaminant (units)	Violation	CL			MCLG	MCL	Likely Source of Contamination
	Y/N		Low	High			
Nitrate (as Nitrogen)							Runoff from fertilizer use; leaching from
(ppm)	No	5.1	1.2 / 5.1		10	10	septic tanks, sewage; erosion of natural
							deposits

**Organic Contaminants** 

organic Contaminants	5					
Contaminant (units)	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
Atrazine (ppb)	No	5	ND - 0.4	3	0.3	Runoff from herbicide used on row crops
Di (2-ethylhexyl) Phthalate (ppb)	No	0.5	ND – 0.9	0	6	Discharge from rubber and chemical factories
Trichloroethylene (ppb)	No	0.2	ND – 1.4	0	5	Discharge from metal degreasing sites and factories
Pentachlorophenol (ppb)	No	0.02	ND – 0.07	0	1	Discharge from wood preserving factories
Di (ethylhethyl) adipate (ppb)	No	0.05	ND - 0.2	400	400	Discharge from chemical factories
Dalapon (ppb)	No	0.03	ND – 0.1	0	1	Runoff from herbicide used on right of ways
Xylenes (ppm)	No	0.05	ND – 0.7	10	10	Discharge from petroleum and chemical factories.

**Secondary and Unregulated Contaminants** 

	Your _				
Contaminant (units)	Water	Range Low High	Likely Source of Contamination		
	average	Low High			
Aldicarb (ppb)	0.09	ND - 0.25	Used as an insecticide on a wide variety of crops		
Metolachlor (ppb)	0.04	ND - 0.2	Herbicide release occurs during manufacture and use in the field		
N-Nitroso-methylethylamine (ppm)	3.9	2.9 – 5.6	Byproduct of water treatment		
Perchlorate (ppb)	0.01	ND - 0.2	Production of matches, flares, fireworks, rockets, and explosives		
Sodium (ppm) 27 14 - 64		14 - 64	Erosion of natural deposits; leaching; water treatment chemicals		

## **Nitrate**

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the United States Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Green Ridge Utilities, Inc. is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a>.

Please call Customer Service at (800) 860-4512 if you have questions on the Greenridge test results at the beginning of the report. You may also call Talad Said or Allen Webb at (410) 638-3939 for questions on the Harford County test results or visit <a href="http://www.co.ha.md.us/dpw/ws">http://www.co.ha.md.us/dpw/ws</a> [choose Water Quality Report] for additional information.

We ask that all our customers help us protect our water sources which are the heart of our community, our way of life and our children's future.

# 2008 Violation Summary Table:

## Violation Description

Start

End

No drinking water quality violations were recorded during 2008.

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alquien que lo entienda bien.